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10/519272

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70) 13 OCT 2004

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Applicant's or agent's file reference P208813PCT EVR/do	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/NL 03/00478	International filing date (day/month/year) 27.06.2003	Priority date (day/month/year) 27.06.2002
International Patent Classification (IPC) or both national classification and IPC B28B7/30		
Applicant CONNECTOR VINKEVEEN B.V.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
 - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 26.01.2004	Date of completion of this report 14.10.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Orij, J Telephone No. +31 70 340-4563 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/NL 03/00478

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-16 received on 16.08.2004 with letter of 16.08.2004

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/NL 03/00478**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-16
	No: Claims	
Inventive step (IS)	Yes: Claims	7,9
	No: Claims	1-6,8,10-16
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

D1: US-A-4 074 499 (MESS RICHARD C) 21 February 1978 (1978-02-21)

D2: US-A-4 003 545 (TANAKA MINORU) 18 January 1977 (1977-01-18)

D3: BE 502 991 A (S.T.U.P.) 31 May 1951 (1951-05-31)

2 The application does not fulfill the requirements of Article 6 because claims **2** and **8** are not clear.

2.1 Claim **2** does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claim attempts to define the subject-matter in terms of the result to be achieved, a surface designed to be able to absorb tensile and compressive forces, which merely amounts to a statement of the underlying problem. The technical features necessary for achieving this result should have been added.

2.2 Claims **8** contains information other than reference sign between brackets (see PCT Guidelines 5.11). It is not clear if the information between brackets is part of the claim, hence claim **8** does not meet the requirements of Article 6.

3.1 Document D1, which is considered to represent the most relevant state of the art concerning claim **1**, discloses (the reference sign in parentheses applying to this document):

A method for arranging engagement means in a concrete part, comprising the steps of providing a body (20) whose exterior comprises an elastomer material, with mechanical properties which are such that there is a considerable reduction in the external diameter at removal from the concrete (column 5 lines 42-50); providing a formwork, arranging said body at the formwork surface, encasing said body in concrete material and removing it from the concrete after setting and removal of the formwork, said body being elongate and is removed from the concrete in its longitudinal direction and is provided with a projection which, at a distance from its end located at the boundary surface of the concrete, is positioned transversely with respect to the longitudinal direction and leaves behind

a non-release recess in the concrete after setting, which recess comprises securing means for an engagement part which is then fitted into the concrete (cf. fig. 1, column 2 line 55 - column 3 line 24).

from which the subject-matter of claim 1 differs in that

said body comprises a core, said core is relatively rigid, comprises a supporting surface and is self-supporting and is secured to said formwork.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

- 3.2 The problem to be solved by the present invention may be regarded as how to make the body self supporting.

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT), because an elastomer body comprising a rigid core secured to the formwork is described in document D2 (cf. fig. 1,3; col. 1 line 66 - col. 2 line 11) as providing the same advantages as in the present application. The skilled person would therefore regard it as a normal option to include this feature in the elastomer plug as described in document D1 in order to solve the problem posed. The subject-matter of claim 1 is therefore not inventive (Article 33(3) PCT).

- 4.1 Dependent claims **3-6,8,10-16** do not seem to contain additional features which, in combination with the features of claim 1 meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

- the securing means comprising a screwthread-like recess, according to claim 3, is known from D1, see fig. 1,
- forming undercut recesses, like bayonet recesses, is one of the main reasons for using elastomeric bodies. It can therefore be considered as an obvious constructional feature, which comes within the scope of the customary practice followed by the person skilled in the art, see for example D3, figure 16,
- the securing means remaining in the recess upon removing of the elastomeric body, according to claim 5, is known from D1, see column 3 lines 14-24,
- the engagement means being hoisting means (claim 6) is known from D1, see

- figure 1, column 4 lines 13-32,
- the engagement part being a bolt (claim 8) instead of a coil as described in D1 (cf. column 4 lines 4-12) is merely one of several straightforward possibilities from which the skilled person would select.
 - the shape and configuration of the elastomeric body, according to claim 10, is known from D1, see figure 6,
 - the method to separate the core from the elastomeric body before that itself is removed, according to claim 11, is known from D2, see figure 8 column 2 line 56 - column 3 line 3,
 - the method for arranging a series of bodies and/or engagement surfaces in a concrete part, according to claims 12 and 13, does not contain additional information in comparison to claim 1 other than the amount of cavities to be cast, which cannot be considered as inventive,
 - securing means comprising a metal part, as claimed in claim 14 is known from D1, see figure 1, reference signs 11,12; column 4 lines 4-20,
 - the transportation of the concrete part, as claimed in claim 15, is implicitly disclosed in D1, in which coils are cast in a concrete part in order to be able to lift it (cf. column 4 lines 4-20),
 - the method to remove the body by hand, according to claim 16, is known from D1 (cf. figure 6 column 40-46).
- 4.2 The features of dependent claims 7 or 9 is neither known from, nor rendered obvious by, the available prior art. The reasons are as follows:
- the method of casting a U-shaped cavity, according to claim 7, provides an relatively simple means to which a hoisting feature can be coupled,
 - the method of casting a concrete with a thread-like structure makes a better connection to closure stopper possible. This possibility is not addressed in the prior art.
5. The subject-matter of claims 1-16 is considered as susceptible for industrial application (Article 33(4) PCT).

100 - DG1

1 6 AUG 2004

Claims

111

1. A method for arranging engagement means in a concrete part, comprising the steps of providing a body whose exterior comprises an elastomer material, with
5 mechanical properties which are such that there is a considerable reduction in the external diameter at removal from the concrete; providing a formwork, arranging said body at the formwork surface, encasing said body in concrete material and removing it from the concrete after setting and removal of the formwork, said body being elongate and is removed from the concrete in its longitudinal direction and is provided with a
10 projection which, at a distance from its end located at the boundary surface of the concrete, is positioned transversely with respect to the longitudinal direction and leaves behind a non-release recess in the concrete after setting, which recess comprises securing means for an engagement part which is then fitted into the concrete, wherein said body comprises a core, cit said core is relatively rigid, comprises a supporting
15 surface and is self-supporting and is secured to said formwork.
2. Method as claimed in claim 1, in which said projection comprises a continuous surface designed in such a manner that it is able to absorb both tensile and compressive forces.
20
3. Method as claimed in claim 1 or 2, in which said securing means comprise a screw thread-like recess in the concrete material and the engagement part is designed accordingly.
- 25 4. Method as claimed in one of the preceding claims, in which said securing means comprise a bayonet-like recess in the concrete material and the engagement part is embodied accordingly.
- 30 5. Method as claimed in one of the preceding claims, in which said securing means (26, 74) are arranged on/in front of the said body, which securing means remain in the recess when said body is removed.

6. Method as claimed in one of the preceding claims, in which the said engagement part comprises hoisting means.

7. Method as claimed in claim 6, comprising the step of providing a cavity which
5 at both ends open out at the same boundary surface of the said concrete part, which cavity is U-shaped and is designed to receive a hoisting feature.

8. Method as claimed in one of the preceding claims, in which the said engagement part comprises an (adjustment) bolt.

10

9. Method as claimed in claim 8, in which the said bolt comprises concrete material.

10. Method as claimed in one of the preceding claims, in which the said core,
15 because of its shape and configuration, gives space to the wall thereof.

11. Method as claimed in one of the preceding claims, in which the said core is separated from the said elastomer material when the body is removed from the concrete.

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12. Method as claimed in one of the preceding claims, comprising the step of providing a series of bodies which are secured to a common carrier.

13. Method according to one of the preceding claims wherein a series of
25 engagement surfaces is arranged in a concrete part, which extend from an outer wall thereof, comprising the steps of, placing a series of bodies into said formwork, wherein each cavity comprising a blind bore.

14. Method as claimed in one of the preceding claims, in which said securing
30 means comprise a metal part which absorbs tensile and/or compressive forces and extends over the entire extent of the concrete part in the transverse direction.

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15. Method as claimed in one of the preceding claims, in which said concrete part is moved to the building site after said recess has been put in place.

16. Method as claimed in one of the preceding claims, in which said body can be
5 removed by hand.